

Amendments to the Claims:

This Listing of Claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

Claims 1-7 (canceled).

Claim 8 (new): An optical transmission unit executing light signal dispersion compensation, comprising:

an optical branching filter which receives a first wavelength-multiplexed light signal and splits it into at least a first light signal and a second wavelength-multiplexed light signal;

a first dispersion compensator coupled to receive the second wavelength-multiplexed light signal and provide dispersion compensation; and

an optical coupler configured to receive at least the second wavelength-multiplexed light signal from the first dispersion compensator and a second light signal, and couple the second wavelength-multiplexed light signal and the second light signal to thereby output a third wavelength-multiplexed light signal.

Claim 9 (new): The optical transmission unit according to claim 8 further comprising a second dispersion compensator coupled to compensate for dispersion of the second light signal.

Claim 10 (new): The optical transmission unit according to claim 8 further comprising a third dispersion compensator coupled to compensate for dispersion of the first wavelength-multiplexed light signal.

Claim 11 (new): The optical transmission unit according to claim 8 further comprising an amplifier coupled to amplify the second wavelength-multiplexed light signal from the first dispersion compensator.

Claim 12 (new): An optical transmission unit executing light signal dispersion compensation, comprising:

an optical branching filter coupled to receive a first wavelength-multiplexed light signal and in response output a second wavelength-multiplexed light signal and a third wavelength-multiplexed light signal;

a first dispersion compensator coupled to compensate for dispersion of the third wavelength-multiplexed light signal; and

an optical coupler configured to receive the third wavelength-multiplexed light signal from the first dispersion compensator and to receive a fourth wavelength-multiplexed light signal, and in response provide a fifth wavelength-multiplexed light signal at an output.

Claim 13 (new): The optical transmission unit according to claim 12 further comprising a second dispersion compensator disposed to compensate for dispersion of the second wavelength-multiplexed light signal.

Claim 14 (new): The optical transmission unit according to claim 12 further comprising a third dispersion compensator disposed to compensate for dispersion of the fourth wavelength-multiplexed light signal.

Claim 15 (new): The optical transmission unit according to claim 12, further comprising an amplifier coupled to receive and amplify the second wavelength-multiplexed light signal from the first dispersion compensator.